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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PERUNGAVOOR, SATHYANARAYA V

ART UNIT

PAPER NUMBER

2624

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/811,761	Applicant(s) WOBBROCK ET AL.	
	Examiner SATH V. PERUNGA VOOR	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 20-36 and 38-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 20-36 and 38-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant(s) Response to Official Action

[1] The response filed on May 22, 2009 has been entered and made of record.

Response to Arguments

[2] Presented arguments have been fully considered, but some are rendered moot in view of the new ground(s) of rejection. Examiner fully addresses below any arguments that were not rendered moot.

Claim Rejections - 35 USC § 102

Summary of Arguments:

Regarding claims 1, 33 and 38 applicant argues that Wu fails to teach, “receiving data representing continuous path made by traversing edges and diagonals within a physical template constraining an input device such that said template defines a plurality of comers”

Examiner's Response:

Examiner respectfully disagrees. Regarding claims 1, 33 and 38 Examiner contends that Wu teaches receiving data representing continuous path because the output from the 4 input buttons *represent* a continuous path. See fig. 1; page 5, para. 2. The path is made by traversing edges and diagonals within a physical template (*i.e.* 12). See fig. 2E. The physical template constraints the input device *such that* said template defines a plurality of comers because the input can be received only in the areas defined for input in 12. See fig. 1; page 5, para. 2.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[3] Claims 1, 2, 4-12, 33-36, 38, 39, 41-49, 54 and 70 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al. (“Wu”) [WO 00/72300 A1].

Regarding claim 1, Wu meets the claim limitations, as follows:

A character recognition method [*fig. 1*], comprising: using a processor (*i.e. 11*) to perform the following method: receiving data representing continuous path (*i.e. the output from the 4 input buttons represent continuous path*) made by traversing edges and diagonals (*i.e. fig. 2E*) within a physical template (*i.e. 12*) constraining an input device such that said template defines a plurality of comers [*fig. 1; page 5, para. 2*]; determining a sequence of comer hits (*i.e. presence or touching of one of the four buttons*) within said path [*fig. 1; page 5, para. 2*]; and identifying a character based on said sequence of comer hits (*i.e. table 2 on page 11*) independently of the path therebetween, wherein each comer hit in said sequence of comer hits corresponds to a comer defined by said template [*fig. 1*].

Regarding claim 2, Wu meets the claim limitations, as follows:

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The method of claim 1 wherein each of said sequences of corner hits defines a single stroke, and wherein each single stroke is representative of one of a letter, number, punctuation or mode [page 12, para. 2].

Regarding claim 4, Wu meets the claim limitations, as follows:

The method of claim 2 wherein said input device is a touch sensitive surface [page 5, para. 2], said method additionally comprising detecting loss of contact with the touch sensitive surface (*i.e. time-out*), said loss of contact indicating the end of a stroke [page 12, para. 3].

Regarding claim 5, Wu meets the claim limitations, as follows:

The method of claim 2 additionally comprising detecting the actuation of a switch, said actuation indicating the end of a stroke [page 3, para. 5].

Regarding claim 6, Wu meets the claim limitations, as follows:

The method of claim 2 wherein said input device is a joystick (*i.e. 100*), said method additionally comprising detecting lack of movement of the joystick for a predetermined period of time (*i.e. time-out*), said lack of movement indicating the end of a stroke [page 14, para. 2; page 12, para. 3].

Regarding claim 7, Wu meets the claim limitations, as follows:

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The method of claim 6 wherein said detecting lack of movement includes detecting the joystick at two identical positions within said predetermined period of time (*i.e. movement to rest*) [page 14, para. 2].

Regarding claim 8, Wu meets the claim limitations, as follows:

The method of claim 7 wherein said positions correspond to a center point [page 14, para. 2].

Regarding claim 9, Wu meets the claim limitations, as follows:

The method of claim 1 wherein said identifying a character is comprised of comparing the determined sequence of comer hits to data representative of a plurality of stored sequences of comer hits [page 12, para. 2], selecting one of the stored sequences of comer hits based on said comparing [*strokes column in table 1 on page 11*], and outputting a character linked to said selected one of said stored sequences of comer hits [*Letter column in table 1 on page 11; page 12, para. 2*].

Regarding claim 10, Wu meets the claim limitations, as follows:

The method of claim 9 wherein said comparing includes comparing the determined sequence of comer hits to a library of stored sequences of comer hits which is representational of a printed alphabet [*Letter column in table 1 on page 11; page 12, para. 2*].

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Regarding claim 11, Wu meets the claim limitations, as follows:

The method of claim 9 additionally comprising changing the stored sequences of comer hits (*i.e. cross-stroke*) that are linked to a character [*page 12, para. 2*].

Regarding claim 12, Wu meets the claim limitations, as follows:

The method of claim 11 wherein said changing includes providing one example of a sequence of comer hits and the character to which that sequence is to be linked [*page 12, para. 2*].

Regarding claims 33-36 all claimed limitations are set forth and rejected as per discussion for claims 1, 4, 5 and 8.

Regarding claims 38, 39, 41-49, 54 and 70 all claimed limitations are set forth and rejected as per discussion for claims 1, 2 and 4-12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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[4] Claims 3, 17, 20-28, 40, 55-65 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Whitaker [US 4,159,471].

Regarding claim 3, Wu discloses the claim limitations as set forth in claim 2.

Wu does not explicitly disclose the following claim limitations:

The method of claim 2 additionally comprising identifying a letter character as being upper case when said stroke representative of said character ends in a common predetermined corner and lower case when said stroke does not end in said common predetermined corner.

However, in the same field of endeavor Whitaker discloses the deficient claim limitations, as follows:

The method of claim 2 additionally comprising identifying a letter character as being upper case when said stroke representative of said character ends in a common predetermined corner (*i.e.* 66) and lower case when said stroke does not end in said common predetermined corner (*i.e.* 66) [*fig. 6; col. 4, ll. 18-40*]..

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Wu with Whitaker and designate a predetermined corner for upper-case determination, the motivation being to avoid toggling between upper and lower case [*col. 5, ll. 20-55*].

Regarding claims 17, 55 and 56 all claimed limitations are set forth and rejected as per discussion for claim 3.

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Regarding claims 20-28, 57-65 and 71 all claimed limitations are set forth and rejected as per discussion for claims 4-12.

Regarding claim 40 all claimed limitations are set forth and rejected as per discussion for claim 3.

[5] Claims 13-16 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Donahey [US 3,996,557].

Regarding claims 13-16, Wu meets the claim limitations as set forth in claim 1.

Wu does not explicitly disclose the following claim limitations:

13. The method of claim 1 wherein said corner hits include corner area hits, said method additionally comprising varying the size of the corner areas while said sequence of corner hits is determined.

14. The method of claim 13 wherein said varying the size includes decreasing the size of only certain corner areas.

15. The method of claim 13 wherein said varying the size includes decreasing the size of certain corner areas more than the size of other corner areas.

16. The method of claim 1 wherein said corner hits include corner area hits, said method additionally comprising varying the shape of the corner areas while said sequence of corner hits is determined.

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However, in the same field of endeavor Donahey discloses the deficient claim limitations, as follows:

Decreasing the size of only certain areas while said sequence of hits is determined and varying the shape of the areas while said sequence of hits is determined. [*col. 5, ll. 20-30*].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Wu with Donahey to vary the sensor area adaptively, the motivation being reduced computation for conventional character recognition [*col. 4, ll. 60-65*].

Regarding claims 50-53 all claimed limitations are set forth and rejected as per discussion for claims 13-16.

[6] Claims 29-32 and 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Whitaker further in view of Donahey.

Regarding claims 29-32, Wu and Whitaker meet the claim limitations as set forth in claim 17.

Wu and Whitaker do not explicitly disclose the following claim limitations:

29. The method of claim 17 wherein said corner hits include corner area hits, said method additionally comprising varying the size of the corner areas while said sequence of corner hits is determined.

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30. The method of claim 29 wherein said varying the size includes decreasing the size of only certain corner areas.

31. The method of claim 29 wherein said varying the size includes decreasing the size of certain corner areas more than the size of other corner areas.

32. The method of claim 17 wherein said corner hits include corner area hits, said method additionally comprising varying the shape of the corner areas while said sequence of corner hits is determined.

However, in the same field of endeavor Donahey discloses the deficient claim limitations, as follows:

Decreasing the size of only certain areas while said sequence of hits is determined and varying the shape of the areas while said sequence of hits is determined. [*col. 5, ll. 20-30*].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Wu and Whitaker with Donahey and vary the sensor area adaptively, the motivation being reduced computation for conventional character recognition [*col. 4, ll. 60-65*].

Regarding claims 66-69 all claimed limitations are set forth and rejected as per discussion for claims 29-32.

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Contact Information

[7] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Matthew C. Bella whose telephone number is (571) 272-7778, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: August 7, 2009

/Sath V. Perungavoor/

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